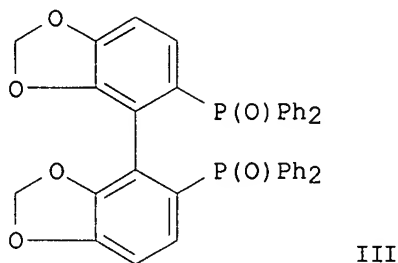
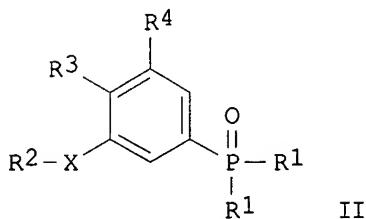
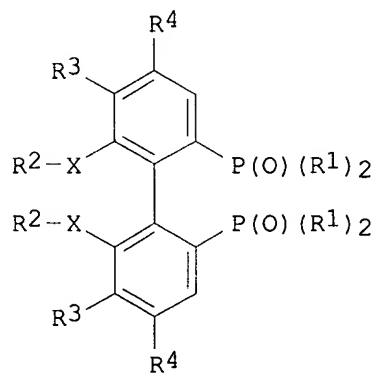


L3 ANSWER 165 OF 212 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:37891 CAPLUS <<LOGINID::20070401>>
 DOCUMENT NUMBER: 132:93468
 TITLE: Preparation of biphenyl diphosphine oxide by lithiation and oxidative coupling of phenylphosphine oxide
 INVENTOR(S): Yokozawa, Susumu; Saito, Takao; Sayo, Noboru; Ishizaki, Takeo
 PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------------------------------------|----------|-----------------|----------|
| JP 2000016997 | A | 20000118 | JP 1998-181027 | 19980626 |
| JP 3146187 | B2 | 20010312 | | |
| PRIORITY APPLN. INFO.: | | | JP 1998-181027 | 19980626 |
| OTHER SOURCE(S): | CASREACT 132:93468; MARPAT 132:93468 | | | |
| GI | | | | |



AB The title compds. [I; R1 = cycloalkyl, (un)substituted Ph, naphthyl, pyridyl, quinolyl, isoquinolyl, furfuryl, benzofurfuryl, thienyl, or benzothienyl; R2 = lower alkyl, lower ether, lower haloalkyl, Ph; X = hetero atom; R3, R4 = hydrogen, halogen, lower alkyl, lower alkoxy, di(lower alkyl)amino, lower haloalkyl, Ph; or R2 and R2 or R3 and R4 are linked to each other to form a ring] are prepared by treatment of phosphine oxide (II; R1 - R4, X = same as above) with base followed by dimerization using oxidizing agent. I are useful as intermediates for diphosphine

comps. which are ligands of metal coordination comps. for an synthesis catalyst. Thus, a solution of 75.22 g diphenyl(3,4-methylenedioxyphenyl)phosphine oxide in 300 mL THF was added dropwise at -10° to -5° to a solution of lithium diisopropylamide prepared by treatment of 40 mL diisopropylamine in THF with 175 mL 1.7 M BuLi solution and stirred at -12° for 15 min to give a lithium reagent which was added to 5.79 g FeCl₃ in 150 mL toluene and 150 mL THF under ice-cooling at 8-10° over 30 min and stirred at room temperature overnight to give 74.8% biphenyl bisphosphine oxide (III).

IT 133545-15-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of biphenyl diphosphine oxide by lithiation and oxidative coupling of phenylphosphine oxide)

RN 133545-15-0 CAPLUS

CN Phosphine oxide, (6,6'-dimethoxy[1,1'-biphenyl]-2,2'-diyl)bis[diphenyl-(9CI) (CA INDEX NAME)

